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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/773,353

02/05/2004

William R. Ratcliffe

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23935

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05/22/2006

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EXAMINER

MAY, ROBERT J

ART UNIT

PAPER NUMBER

2875

DATE MAILED: 05/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/773,353

Applicant(s)

RATCLIFFE, WILLIAM R.

Examiner

Robert May

Art Unit

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-8, 15-30, 33 and 34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-13, 20, 21, 26, 27, 30 and 34 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-8, 15-19, 22-24, 28, 29 and 33 is/are rejected.
- 7) ☒ Claim(s) 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Withdrawal of Indicated Allowability

The indicated allowability of claims 7-8, 15-16, and 23-24 is withdrawn in view of the reference(s) to Lamorte.

On 10 May 2006, a phone interview with the applicant's representative Joseph Compton was conducted regarding an Examiner's amendment, however, in light of the new basis of rejection, the proposed Examiner's Amendment is withdrawn.

Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 15, 16-19, 22-23, and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Lamorte (US Pat 3,290,539).

Regarding Claims 1, 3, 15, 17, and 33, Lamorte discloses in Figure 2, a light display structure comprising a first conductor 10 and a second conductor 20, a plurality of light-emitting elements being the P-N junction 14 (Col 1, lines 10-12), a resistive member 18 on top of the PN junction (Col 3, lines 19-24), a spacer 17 which spaces the first and second conductors apart and defines an array of apertures 16 (Figure 1) and

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light redirectors 16 which receives a respective one of said light emitting elements 14 and each light redirector redirects light from a respective light-emitting element (Col 2, lines 61-63).

Regarding Claims 2,4,18, and 22-23 Lamorte discloses in Figure 2, the light redirectors 16 as having a concave shape or cup shape.

Regarding Claim 19, Lamorte discloses the redirector as having a parabolic shape (Col 2, lines 61-63).

Regarding Claim 16, Lamorte discloses the resistive member as being an epitaxial layer which would have been known in the art as a layer which is deposited using a thin film deposition method called epitaxy (Col 3, lines 22-23).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lamorte as applied to claim 15 above, and further in view of Shen.

Lamorte fails to disclose a polymer tube enclosing the first and second conductors, light emitting elements and resistive members. However, Shen discloses a flexible plastic tube 10 covering in which the LEDs and conductors of an LED light set are embedded in order to protect the electrical components. Therefore, it would have

been obvious to one of ordinary skill at the time the invention was made to modify the light display structure with the polymer tube of Shen to protect the electrical components.

Claims 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lamorte as applied to claim 23 above, and further in view of Shimizu (2003/0189829). Lamorte fails to disclose a structure as recited by Claim 23 wherein a phosphor film is carried on a transparent sheet positioned over the array of light redirectors. However, Shimizu discloses in Figures 1a and 14a an LED illumination apparatus with an array of apertures and LEDs where a layer is dispersed on top of the reflector for altering the emitted wavelength of the LED in order to emit a white light for illumination purposes (Pg 17, Para [0244]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the light structure of Lamorte with the phosphor sheet or film of Shimizu so that the wavelength of the LED can be altered in order to emit a white light.

Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lamorte in view of Baldi (US Pat 6,465,950).

Lamorte discloses in Figure 2, a light display structure comprising a plurality of light-emitting elements being the P-N junction 14 (Col 1, lines 10-12), a first conductor 10 and a second conductor 20 being a wire bonded to the light emitting element, and a resistive member 18 on top of the PN junction (Col 3, lines 19-24).

Lamorte fails to disclose an insulator carried over one of said first or second conductors wherein the insulator defines a plurality of apertures that each receive a respective one of said light-emitting elements. However, Baldi discloses in Figures 1-5, a FED screen for emitting light (Col 1, lines 32-34) comprising a dielectric material 6 made from silicon oxide (Col 3, lines 50-52) which defines a plurality of apertures for receiving a light emitting element or microtips which insulating the cathode from an electric grid. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the structure of Lamorte by making the spacer 17 of Lamorte out of a dielectric material in Baldi to electrically insulate the first conductor 20 from the second conductor 10 but also permit coupling of the light emitting elements to the first and second conductors.

Allowable Subject Matter

Claims 10-13, 20-21, 26-27, 30, and 34 are allowed.

Claim 25 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

Regarding Claim 25 prior art does not show or teach a display structure as recited in Claim 23 wherein said spacer comprises a polymer.

Regarding Claims 10-13, the prior art teaches all of the elements of Claim 10 except for tabs in which the light-emitting element is coupled between the second conductor and one of said tabs.

Regarding Claims 20, and 26-27 the prior art teaches all of the claimed elements of independent Claim 20 except for first and second light redirectors that diverge with increasing distance from said aperture.

Regarding Claim 21, the prior art teaches all of the claimed elements recited in Claim 21 except for a phosphor film carried on said light redirectors to enhance light radiated by the light-emitting elements.

Regarding Claim 30, the prior art teaches all of the elements recited in Claim 30 except for a polymer member that defines a mounting surface, flange or outward-extending rib.

Regarding Claim 34, the prior art teaches or suggests all of the recited elements of Claim 34, except for a phosphor film spaced from said light redirector.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kenmochi (5,664,667) discloses a light display structure with spacer, two conductors and a light emitting element.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert May whose telephone number is (571) 272-5919. The examiner can normally be reached between 9 am– 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300 for all communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval PAIR system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RM

5/10/06



RENEE LUEBKE
PRIMARY EXAMINER